NOTES ON CERAMBYCIDAE FROM THE SOUTHEASTERN U.S. (COLEOPTERA)[1]

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ABSTRACT: New larval host plants, distributional, ecological and taxonomic records are presented for 36 species and subspecies of Cerambycidae from the southeastern U.S. *Derancistrus rugosus* (Gahan) and *Eburia cinereopilosa* Fisher are recorded from the U.S. for the first time, and new state records for *Tylonotus masoni* (Knull), *Euderces picipes occidentalis* Linsley and *Zaplous annulatus* (Chevrolat) are presented. First larval hosts are reported for *Euderces p. occidentalis*, *E. pini* (Olivier), *Leptostylus albescens* (Haldeman), *Leptostylopsis planidorsus* (LeConte), *Styloleptus minuens* (Hamilton), *Urgleptes kissingeri* Dillon, *Feyrus dasycerus floridanus* Linsley and *Oberea gracilis* (Fabricius). *Sternidius moderator* (Casey) is placed as a junior synonym of *Sternidius schwarzi* (Hamilton). Comparative, synonymical or supplemental information is given for an additional 9 species.

Although the Cerambycidae of the United States have been actively studied for many years, details of the life histories of many species remain unknown. This is particularly true of the southeastern fauna, which, except for a few brief annotations in regional catalogues, has received little attention. Much of the available biological information for species occurring in the southeast is based upon findings in other portions of their overall distributions, and the recorded hosts for many species do not even occur in the area. Moreover, many of the commonly collected species, such as *Styloleptus biustus* (Lec.), have consistently been confused with other species in the literature, appearing under a variety of generic and specific epithets. Older published accounts, therefore, are frequently quite difficult to interpret within current species concepts.

The records reported here are based upon collections made during 1974-8, and apparently represent new distributional, larval host or ecological records for 36 southeastern longhorn species. Rearing methodologies have been described elsewhere (Turnbow and Wappes, 1978). Unless otherwise indicated, specimens are in the collections of the authors.

Prioninae

Derancistrus (Elateropsis) rugosus (Gahan). — This species has

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previously been recorded only from Cuba and the Bahama Islands (Cazier and Lacey, 1952). A single female matching Zayas' (1975) and Cazier and Lacey's characterization of *D. rugosus* was beaten by R. Turnbow from foilage of living pigeon plum *(Coccoloba diversifolia* Jacq.) on Key Largo, Florida (Monroe Co.) in June, 1978. In general appearance females of *D. rugosus* closely resemble those of *D. lineatus* (L.) and *D. scabrosus* (Gahan), with which it is largely sympatric. From *lineatus* it may be separated by the coarsely, rugosely punctate elytral humeri, and from *scabrosus* by the longitudinal white pubescent vittate on the elytra. In a series of a dozen specimens of *Derancistrus* since reared by F. Hovore and R.L. Penrose from old, dead branches of poisonwood *(Metopium toxiferum* (L.) Krug and Urban) and gumbo limbo *(Bursera simaruba* (L.) Sarg.), several females have feeble traces of white vittae at the elytral apices and have the lateral margins of the abdominal sternites white pubescent, and one female has the dorsal vittae fully developed, as in the Turnbow specimen. The reared specimens were cut from the wood as pupae and prepupae, and no attempt was made to segregate specimens according to host plant. Therefore, although the evidence would suggest that *rugosus* is an infrequent polymorph of *scabrosus* (characters for separating male cited by Cazier and Lacey are extremely subjective), we cannot positively demonstrate synonymy with additional field and rearing data.

Lepturinae

Typocerus badius (Newman). — Linsley and Chemsak (1976) recorded this species as occurring from Georgia to central Florida on flowers of *Olea americana* L. and *Ilex*. The authors and E.F. Giesbert collected large numbers of adults on flowers of farkleberry (*Vaccinium arboreum* Marshall) and *Cornus asperifolia* Michaux near Old Town, Florida (Dixie Co.) in May, 1978. One female was observed ovipositing in a bark fissure on the side of a small (ca. 10 cm. diameter) stump of *Quercus* sp.

Cerambycinae

Methia pusilla (Newman). — *Taxodium* has been cited (Linsley, 1963) as the only host for this species since Craighead's (1923) description of the larva. However, we, and others (Turnbow and Wappes, 1978), have collected large series of this methiine far from any sources of *Taxodium*. Recently, we have reared specimens from dead branches and twigs of live oak (*Quercus virginiana* Miller) collected near Old Town, Florida.

Eburia cinereopilosa Fisher. — In May, 1971, J.E. Wappes collected 5 specimens of this Cuban species at building lights on Marathon Key, Florida (Monroe Co.). These specimens, which represent the first U.S.

record for the species, have the integument reddish-brown (described as blackish in the female holotype, Fisher, 1932), but match in all essential details Zayas' (1975) characterization and illustration of *cinereopilosa*.

Eburia stigma (Olivier). — Blatchley (1923) reported beating specimens of *E. stigma* from foliage of young caribbean pine (based upon a misidentification of *Pinus elliotti* var. *densa* Little and Dorman), and Linsley (1962), citing this record, listed *P. caribaea* as the host. However, Thomas (1977) reported digging a pupa of *E. stigma* from the stump of a hardwood tree, possibly mastic (*Mastichodendron foetidissimum* (Jacq.) Cronquist). We can confirm mastic and add wild tamarind (*Lysiloma latisliqua* (L.) Benth.) as larval hosts of this longhorn. Adults were reared and cut from dead limbs and trunks of these trees on Key Largo. The life cycle is apparently completed in one year.

Tylonotus masoni (Knull). — Linsley (1962) gives the range of this uncommon species as the central U.S., citing localities in Texas, Oklahoma, Missouri, Iowa, Illinois, Indiana and Ohio. The species also occurs in the southeastern states, at least in their northern sections. Specimens have been collected in black light traps in Mississippi (Starkville, Oktibbeha Co., W.H. Cross) and Georgia (Whitehall Forest, Clarke Co., R. Turnbow).

Knulliana cincta ochracea (Bates). — This southeastern subspecies has been recorded from *Carya pecan* (Marsh.) Engl. & Graebn. (Loding, 1945; Fattig, 1947) and *Ostrya virginiana* (Mill.) K. Koch (Knull, 1937). We have reared specimens from woods of dead strangler fig (*Ficus aurea* Nutt.), wild tamarind, poisonwood and buttonwood (*Conocarpus erecta* L.) collected on Key Largo and in the Everglades National Park, Florida (Monroe Co.).

Aethecerinus horni (Lacordaire). — This Florida endemic is extremely rare in collections, a few specimens having been taken in malt traps in scrub oak areas (Woodruff, 1973, p. 173), and one "from flowers of farkleberry (*Vaccinium arboreum*)" (Blatchley, 1914). We collected a large series of adults near Old Town, Florida on stumps, dead branches and living new growth of red bay (*Persea bourboni* (L.) Sprengel), and at fermenting exudates in bark fissures of *Quercus* sp. Mating aggregations were frequently encountered on the scarred buttresses of crown-sprouting stumps, with as many as 13 individuals present in a single aggregation. No positive evidence of larval development or adult emergence was found, even in older dead stumps and logs. Both sexes were observed feeding at the margins of fresh, moist, fermenting bark scars, in company with numerous ants, nitidulids and an occasional specimen of *Ancylocera bicolor* (Olivier).

Curtomerus flavus (Fabricius). — This pale testaceus species has been recorded from a variety of host plants from throughout the American tropics

(Duffy, 1960). In the continental U.S., *C. flavus* is apparently restricted to southern Florida, where we have found it infesting mastic, poisonwood, Jamaica dogwood (*Piscidia piscipuls* (L.)) Sarg. and pigeon plum. Adults may be found at night, running rapidly over the surface of dying or dead host materials.

Elaphidion cryptum Linsley. — Hovore et al (1978) reported collecting adults of this species on freshly cut, down-hanging branches of wild tamarind. The larval host, however, is apparently unknown. We have reared specimens from cut limbs and trunks of poisonwood and red mangrove (*Rhizophora mangle* L.) from Key Largo, Florida.

Anelaphus subtropicus (Casey). — Known Caribbean hosts of this species have been summarized by Duffy (1960). In the U.S., *A. subtropicus* occurs only in southern Florida, where it has been recorded as breeding in *Conocarpus erecta* (Schwarz, 1887). We have reared specimens from wild tamarind (RHT) and poisonwood (FTH) on Key Largo. Adults are attracted to dead and dying hosts and are active on such materials at night. A series of specimens was beaten from recently fire-scorched gumbo limbo foliage, in company with *Methia pusilla* and *Plectromerus dentipes* (Olivier).

Plectromerus dentipes (Olivier). — According to Linsley (1963), the hosts of this species include *Quercus*, *Carya pecan* and *Crossopetalum rhacoma* Hitchc. We have reared specimens from dead limbs and trunks of buttonwood, wild tamarind and poisonwood collected in the Florida Keys. The life cycle is completed in one year.

Plinthocoelium s. suaveolens (Linnaeus). — Linsley (1964) cited *Nyssa uniflora* and *Morus* sp. as the hosts of this subspecies, and Linsley and Hurd (1959) detailed the larval habits of the subspecies *plicatum* (LeConte) in *Bumelia languinosa*. We found *suaveolens* in the stems and roots of *Bumelia* sp. in the pinewood-grasslands of the Everglades National Park. Larval mines were quite extensive in the lower stems of the small, less than 10 cm. diameter plants, often causing them to break off just above ground level. Adults, including mating pairs, were taken in large numbers on flowering *Bumelia*, and occasional individuals were found on blossoms of palmetto.

Neoclytus cordifer (Klug). — This attractive clytine has been recorded from a variety of host materials (Linsley, 1964). We have reared specimens from tallowwood (*Ximenia americana* L.), mastic, Jamaica dogwood and wild tamarind in the Florida Keys, but in contrast to the report of Back (1918), attacks were made only on dying or dead host materials. In the laboratory, these woods were repeatedly reinfested.

Euryscelis suturalis (Olivier). — This strongly dimorphic species is known from the West Indies and southern Florida. In Puerto Rico, *Prosopis*

juliflora DC. has been recorded as the host (Wolcott, 1936 and 1948; Martorell, 1945, cited in Duffy, 1960). We have reared adults from recently killed mastic and poisonwood from Key Largo.

Euderces picipes occidentalis Linsley. — Two specimens of *E. picipes*, matching precisely Linsley's (1964) diagnosis of the subspecies *occidentalis* (rufous coloration with abdomen and elytral apices piceous), were collected in April, 1975 by F. Hovore, 2 miles west of Ponce De Leon, Florida (Walton Co.). One specimen was taken on a blossom of *Rubus* and the other reared from a branch of *Quercus* sp. girdled by *Oncideres cingluatus* Say. Specimens attributable to this subspecies have also been collected in Stone (Kimberling City, E.G. Riley), Stoddard (Holly Preserve, 2.8 mi. NE Dexter, S.O. Swadener) and Callaway (Reform, S.O. Swadener) counties in Missouri. From these records, it would appear that the subspecies *occidentalis* occurs in a broad area along the southern margin of the species range.

Euderces pini (Olivier). — Linsley (1964) recorded no host for this widespread eastern species, although Loding (1945) reported specimens beaten from oak. R. Turnbow has reared specimens from dead limbs and twigs of dogwood (*Cornus florida* L.), winged elm (*Ulmus alata* Michx.) (both Whitehall Forest) and pecan (Winder, Barrow Co., Georgia). These Georgia specimens differ from typical *pini* by their uniformly piceous integument. This phenotype seems to predominate in populations in northeastern Georgia, although occasionally individuals with dark reddish-brown integument are encountered. Specimens from the central part of the state are similar to those from other parts of the species' range.

Osmopleura chamaeropis (Horn.)— Adults of this uncommon species have long been associated with cabbage palmetto (*Sabal palmetto* (Walt.) Lodd. ex Schultz), with specimens having been collected from blossoms and foliage (Blatchley, 1925; 1928). Recent collections of large series of *O. chamaeropis* at Long Pine Key and Pinelands Trail, Everglades National Park (Dade Co.), by the authors and R.L. Penrose contribute to the knowledge of the habits of this species. Occasional individuals were collected from blossoms or resting on foliage of *S. palmetto*, but the majority were found in the deep interspaces between living stems in the basal rosettes of the palmettos. The cuneate elytra allowed for deep retreat upon disturbance, and the striped head and prothorax blended well with the decomposing litter accumulated in the rosette. Feeding larvae, pupae and teneral adults were collected from dead, dried inflorescences, and from dead leaf bases persisting on the trees. The eggs are apparently laid on green inflorescences or at the bases of the outermost living leaves, as feeding larvae were always found in the most recent, completely dead portions of the plant. A single dead female of *Zagymnus clerinus* (LeConte) was also encountered in the basal rosette of a large cabbage palmetto.

Lamiinae

Leptostylus albescens (Haldeman). — This strikingly marked species apparently has no recorded larval host, although Kirk (1969) reported an adult taken "on oak trunk". F. Hovore has beaten specimens from trunks of dead *Ilex* sp. near Old Town, Florida, and R. Turnbow has reared specimens from trunk sections of sweet gum (*Liquidambar styraciflus* L.) cut in Whitehall Forest, Georgia.

Leptostylus transversus floridellus Dillon. — Typical *L. transversus* is known to breed in dead wood of a wide range of hardwood species, but few of these recorded hosts occur within the range of the subspecies *floridellus*. Champlian *et al* (1925) reared *floridellus* (recorded as *Leptostylus aculifer* Say) from dead gumbo limbo at Paradise Key, Florida. We have reared specimens from this host as well as from mastic in the upper Florida Keys and poisonwood in the lower Keys. Oviposition occurs on the larger diameter woody parts of recently dead trees. Larval development apparently requires one year.

Leptostylopsis planidorsus (LeConte). — Although it occurs throughout the southeastern U.S., this species apparently has no recorded host. We have reared a single female from trunk sections of river birch (*Betula nigra* L.) cut in Whitehall Forest (RHT), and 3 specimens from dead vines (probably a *Vitis* sp.) collected on Key Largo (FTH). Adults were beaten by F. Hovore and R.L. Penrose from *Ulmus* sp. near Enterprise, Volusia Co., Florida.

Leptostylopsis terraecolor (Horn). — Craighead (1923) described the larva of this common species from specimens taken from seeds of *Rhizophora mangle*, and Dillon (1965a) listed mastic and shortleaf fig (*Ficus citrifolia* Mill.) as hosts. We found *L. terraecolor* to be extremely abundant on fire-killed woody vegetation on Key Largo in May, 1977, and on slash in and about the Everglades National Park in May, 1978. Subsequently, specimens have been reared from woody parts of dead poisonwood, wild tamarind, Jamaica dogwood, grape (*Vitis* sp.), strangler fig, gumbo limbo and red mangrove. Specimens have also been reared from dead wood of Florida privet (*Forestiera segregata* (Jacq.) Krug and Urban) collected on Sanibel Island, Florida (Lee Co.). If Zayas (1975) interpretation of *L. incrassatus* (Klug) is correct. *L. terraecolor* would be a junior synonym of that species.

Styloleptus b. biustus (LeConte). — This species has been the subject of considerable taxonomic confusion in the literature, and many of the records attributed to it probably refer to other genera and species. Recorded hosts include such disparate plants as Cassava (Wolcott, 1933), "dried-up pomengranate" (Riley, 1880) and Norway spruce (Kirk and Knull, 1926). However, the majority of records have been from various hardwood species

(Hubbard, 1885; Craighead, 1923; Löding, 1945; Fattig, 1947; and Kirk, 1969, among others). In Florida we have reared it from limbs and trunks of dead strangler fig (near Andytown, Broward Co.), poisonwood (Key Largo) and *Ilex* (near Old Town).

Styloleptus minuens (Hamilton). — This species was originally described (1896) from material beaten from dead vines of *Melothria pendula* L. We have beaten specimens from dead *Metopium* in Miami and from freshly cut, down-hanging branches of *Zanthoxylum fagara* (L.) Sarg. in Grossman Hammock (both Dade Co., Florida), and collected numerous individuals at light in the Everglades National Park. F. Hovore reared a single specimen from dead twigs of gumbo limbo from Key Largo. *Lethes israeli* Zayas (1975), based upon the original description and figure, is very close to, if not synonymous with, this species.

Nyssodrysina haldemani (LeConte). — Chemsak and Linsley (1975) recorded the range of this species as extending from the eastern U.S. to Panama, but Craighead's (1923) description of the larva from *Celtis* apparently represents the only recorded host data. We have reared large numbers of *N. haldemani* from strangler fig taken near Andytown, Florida, and E.F. Giesbert (pers. comm.) has reared it from gumbo limbo from Miami.

Sternidius schwarzi (Hamilton) (=*Sternidius moderator* (Casey): NEW SYNONYMY. — Species in this genus have had a history of taxonomic confusion and misidentification, and although numerous host plant records for southeastern species of "*Leiopus*" exist in the literature, it is difficult to associate them within modern species concepts. The "*Liopus* (sic) *punctatus*" of Craighead (1923), by the range cited, may refer to *S. schwarzi*; if so, persimmon, *Ampelopsis, Cornus* and *Prunus* serve as hosts. Perry (1974) collected adults on *Morus* in Virginia (recorded as *moderator*), and we have taken mating pairs by beating freshly-cut, down-hanging branches of wild tamarind on Key Largo. We have also reared numerous specimens from recently-dead limbs and trunks of Jamaica dogwood and poisonwood from Key Largo, and a few specimens from twigs of a *Rhus* sp. which had been girdled and killed by *Oncideres cingulatus* Say near Spring Hill, Florida (Pasco Co.). Forms assignable to both *schwarzi* and *moderator*, along with numerous intermediate specimens, occur throughout our material.

Urgleptes kissingeri Dillon. — This diminutive species is evidently known only from sothern Florida, and its host is unrecorded. On Key Largo we have beaten adults from dead portions of lantana (*Lantana involucrata* L.), wild tamarind and other hardwoods, and reared specimens from sections of decadent and dead Jamaica dogwood. Further study will undoubtedly show this species to be synonymous with *U. foveatocollis*

(Hamilton); Dillon (1956b) included *foveatocollis* only as an "Incertae Sedis", making no attempt to compare it to his *kissingeri*, despite the fact that both were known from southern Florida.

Zaplous annulatus (Chevrolat). — Recorded only from Florida and Cuba (Linsley, 1935), this obscure little pogonocherine was recently collected in Georgia by R. Turnbow in Whitehall Forest. Single specimens (one of each sex) were taken in a malaise trap and a window trap in June, 1977. Turnbow also collected 3 specimens by beating living foliage of *Ilex* sp. in a recently cut over area near Old Town, Florida.

Ecyrus dasycerus floridanus Linsley. — Although the nominate form of *E. dasycerus* has been recorded from a number of hardwood species (Linsley, 1935), the subspecies *floridanus* apparently has no recorded host. We have taken it commonly at light and by beating slash in the Everglades National Park and on Key Largo, and the senior author has reared specimens from limbs of dead wild tamarind and poisonwood (Key Largo) and from cut limbs of strangler fig collected near Andytown, Florida. Material from Key Largo tends to be somewhat darker than that from the Everglades, and specimens from central Florida are difficult to align with either subspecies. Specimens phenotypically similar to *floridanus* have been collected as far north as Kite (Johnson Co.) in central Georgia, in association with turkey oak (*Quercus laevis* Walter) (RHT).

Ataxia crypta (Say). — This widespread lamiine has been recorded from an unusual array of plant species, including various hardwood trees (*Quercus, Castanea* and *Pyrus*) and a variety of herbaceous or shrubby plants (*Xanthium, Verbesina, Ambrosia, Thurberia, Smilax* and *Gossypium*) (Craighead, 1923). Earlier records may in part refer to *Esthologena hubbardi* (Fisher) described in 1924) which commonly infests annual plants. In the Florida Keys we have found *A. crypta* breeding in the dead, woody trunks of cut mastic.

Ataxia falli Breuning. — Craighead (1923) described the larva of this cryptic species (as *A. sulcata* Fall) from specimens taken from seeds of red mangrove. We have reared specimens from trunk sections of decadent Jamaica dogwood collected on Key Largo, and have beaten it from red mangrove and poisonwood in the same area.

Ataxia spinicauda Schaeffer. — This distinctive species is uncommon in U.S. collections, and although Zayas (1975) indicated that it is commonly collected in Cuba, apparently nothing is recorded of its habits. In May, 1978, A.E. Lewis took a single specimen at light on Key Largo, and in the following month the senior author beat a single female from slash of poisonwood at the same locality. This specimen was taken in company with *A. crypta* and *A. falli*. The slash had been cut during the preceding month.

Spalacopsis filum costulatum Casey. — Hamilton (1895; and 1896, in

Leng and Hamilton) recorded *Melothria pendula* as a host of this subspecies (as *S. linum* Duval) and Tyson (1973) cited a specimen beaten from *Calonyctium aculeatum* (*Ipomoea alba* L.). Adults of *S. f. costulatum* were abundant on slash piles east of the entrance to the Everglades National Park in June, 1978 (RHT); specimens have also been taken on fresh-cut wild tamarind at night, and on dead gumbo limbo (both Key Largo) (FTH). R. Turnbow reared a single female from buttonwood slash, collected near Flamingo in the Everglades National Park (Monroe Co.), the specimen emerging in July, 1977, from wood cut the preceding spring.

Spalacopsis stolata (Newman). — Craighead (1923) described a larva, presumably that *S. stolata*, from specimens taken from stalks of Jerusalem oak (*Chenopodium botrys* L.). Subsequently, specimens have been collected on *Verbesina* and *Flaveria linearis* Lag. (Tyson, 1973). In May, 1978, F. Hovore collected a specimen of *S. stolata* by beating dead gumbo limbo on Key Largo.

Mecas femoralis (Haldeman). — Although recorded from North Carolina to Florida, this species is rare in collections (Chemsak and Linsley, 1973). The authors and R.L. Penrose collected a series of *M. femoralis* flying about and resting on foliage of a small, grasslike *Aster* growing amidst mixed roadside vegetation in a sandhill-scrub oak community, 1-2 miles west of Archer, Florida (Alachua Co.).

Oberea gracilis (Fabricius). — The host and habits of this southeastern species apparently have not been previously described. In early June, 1978, R. Turnbow encountered adults of this species resting on and flying about young (less than 0.5 m. tall) white oaks (*Quercus alba* L.) and southern red oaks (*Q. falcata* Michx.) growing along highway 52 in Hall Co., Georgia. Subsequent observations indicated that *O. gracilis* has a 2-year life cycle in these seedling oaks. Oviposition occurs on the terminals of apparently healthy trees in May and June, and larvae mine down one side of the stem, becoming inactive with the onset of winter. The following spring, mining resumes, with the larva expelling frass through a linear series of round holes. In late June, the tree is girdled, approximately 10-15 cm. above the soil surface. This girdling kills the tree, at which time infested plants are easily recognized. Through the remainder of the year, mining continues down into the root collar, where the larva reverses itself and pupates. The dead portions of the tree distal to the girdle apparently break off during the following winter. Adults emerge, probably through the frass plug at the girdle site, late in the second spring.

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